CLAIMS

1. (previously presented) A method for controlling the update frequency of a positioning device in a mobile terminal, said method comprising:

storing at least one reference position indicative of a remote location of interest in said mobile terminal, said reference position not a previously determined position of said mobile terminal;

determining the current position of said mobile terminal:

computing a distance of said current position of said mobile terminal from said reference position; and

determining a position update frequency based on said distance between said current position of said mobile terminal and said reference position.

2. (original) The method of claim 1 wherein determining a position update frequency based on said distance between said current position of said mobile terminal and said reference position comprises increasing said update frequency as said distance between said current position of said mobile terminal and said reference position decreases.

3. (original) The method of claim 1 wherein determining a position update frequency based on said distance between said current position of said mobile terminal and said reference position comprises decreasing said update frequency as said distance between said current position of said mobile terminal and said reference position increases.

4. (original) The method of claim 1 further comprising determining the velocity of said mobile terminal based on two or more position estimates.

5. (previously presented) The method of claim 4 wherein determining said position update frequency as a function of said distance between said current position of said mobile terminal and said reference position further comprises determining said position update frequency as a function of said distance between said current position and said reference position and said velocity of said mobile terminal.

6. (original) The method of claim 5 wherein determining said position update frequency as a function of said distance between said current position of said mobile terminal and said reference position and said velocity of said mobile terminal comprises increasing said position update frequency as said velocity increases and decreasing said position update frequency as said velocity decreases.

7. (original) The method of claim 1 further comprising:

comparing said distance between said current position of said mobile terminal and said reference position to a predetermined threshold; and

performing a predetermined action if said distance between said current position of said mobile terminal and said reference position meets said threshold.

8. (original) The method of claim 7 wherein performing a predetermined action if said distance between said current position of said mobile terminal and said reference position meets said threshold comprises searching for a channel in an alternate network.

9. (previously presented) The method of claim 8 wherein searching for a channel in an alternate network comprises searching for a control channel in a private wireless telephone system.

10. (previously presented) A mobile terminal comprising:

a transceiver transmitting and receiving signals over a wireless channel;

memory storing at least one reference position indicative of a remote location of interest other than a previously determined position of said mobile terminal;

a position estimator to periodically determine a current position of said mobile terminal at a variable position update frequency; and

control logic including a processor to calculate the distance of said mobile terminal from said reference position based on said current position of said mobile terminal and to adjust said variable position update frequency as a function of said distance of said mobile terminal from said reference position.

11. (original) The mobile terminal of claim 10 wherein said position estimator is in a removable device removably attached to said mobile terminal.

12. (original) The mobile terminal of claim10 wherein said position estimator comprises a GPS receiver.

13 – 21 (cancelled)

22. (currently amended) ~~The method of claim 20, including~~ A method of initiating a search for a control channel in a communications network by a mobile terminal, said method comprising:

storing at least one reference position indicative of a central point of said communications network in said mobile terminal;

determining the current position of said mobile terminal;

computing the distance of said current position of said mobile terminal from said reference position;

determining the rate of change in said position of said mobile terminal relative to said reference position; and

initiating a search for a channel when: (i) said distance between the mobile terminal and the reference position is less than said predetermined distance, and, (ii) said rate of change in said position of said mobile terminal relative to said reference position exceeds a predetermined value.

23 – 26 (cancelled)

27. (currently amended) ~~The mobile terminal of claim 23, wherein~~ A mobile terminal comprising:

a transceiver transmitting and receiving signals over a wireless channel;

memory storing at least one reference position indicative of a central point of a communications network;

a position estimator to determine a current position of said mobile terminal; and

control logic including a processor to calculate the distance of said mobile terminal from said reference position based on said current position of said mobile terminal, and ~~said control logic~~ to further calculate~~s~~ the rate of change of said current position of said mobile terminal relative to said reference position, and to initiate~~s~~ a search for a channel based on said calculated distance between said mobile terminal and said reference position and said rate of change of said current position of said mobile terminal relative to said reference position.

28. (cancelled)

29. (previously presented) A method for controlling the initiation of searches by a mobile terminal for a channel associated with a private radiocommunication system, said method comprising:

storing a reference position within the mobile terminal, said reference position not a previously determined position of said mobile terminal, and being within the boundaries of the private radiocommunication system;

determining the current position of said mobile terminal;

computing the distance of said current position of said mobile terminal from said reference position;

initiating a search for a channel provided by said private radiocommunication system in response to said computed distance between said current position of said mobile terminal and said reference position being less than a predetermined distance.

30. (previously presented) The method of claim 29, wherein determining the current position of said mobile terminal and computing the distance of said current position of said mobile terminal from said reference position are performed repeatedly.

31. (previously presented) The method of claim 29, wherein said mobile terminal repeatedly searches for a channel provided by said private radiocommunication system as long as said distance of said current position of said mobile terminal from said reference position is less than a predetermined distance.

32. (previously presented) The method of claim 29, further including determining the rate of change of said distance between said current position of said mobile terminal and said reference position and initiating a search for a channel provided by said private radiocommunication system in response to:

(i) said rate of change being greater than a predetermined value, and,

(ii) said distance between said current position of said mobile terminal and said reference position being less than a predetermined distance.

33. (original) The method of claim 29, wherein initiating a search for a channel provided by said private radiocommunication system is further based on the rate of change of said distance between said current position of said mobile terminal and said reference position.

34. (cancelled)

35. (original) ~~The method of claim 34 further comprising:~~ A method of controlling the initiation of a search by a mobile terminal for a channel associated with a radiocommunication system comprising:

repeatedly determining the location of the mobile terminal with respect to a central point associated with the radio communication system;

repeatedly determining the rate of change of said distance between said mobile terminal and said reference position; and

initiating a search for the channel associated with said radio communication system when:

(i) the distance between said mobile terminal and said reference position is less than said predetermined distance, and,

(ii) when the rate of change of the distance between said mobile terminal and said reference position exceeds a predetermined value.

36 – 37 (cancelled)